Remarks

Applicants have carefully reviewed the Official action mailed May 11, 2010. To better point out and claim their invention, applicants have amended claim 1. Following this amendment, claims 1-14 remain in the application, which presently stand rejected in the Office action.

Before proceeding to address the present rejection, applicants will summarize their invention. As recited in amended claim 1, applicants provide a technique for simulating film grain by selecting from among a pool of previously established film grain blocks the selected block having an image parameter, such as intensity for example, whose average value most closely matching the average value of the corresponding parameter of the image. Independent method claim 8 also recites selecting a film grain block from among a pool of film grain blocks in a manner analogous to the selecting step recited in claim 1.

35 U.S.C. § 103(a) Rejection of Claims 1-14

Claims 1-14stand rejected under 35 U.S.C. § 103(a) as obvious over the publication "Film Grain Coding in H.264" by Martin Schlockermann et al., (XP-00231238) in view of the publication "SEI message for Film Grain Encoding: Syntax and Results" by Cristina Gomila (XP-002308743). Applicants traverse the rejection, in view of the amendments to claim 1 and the features presently recited in claim 8.

Before proceeding to distinguish their claims from the art of record, **applicants note that the examiner has erred by failing to explicitly identify all the references relied upon in making the 35 U.S.C. § 103(a) rejection.** In particular, the examiner has relied upon the Gomila publication "SEI message for Film Grain Encoding: Syntax and Results" (XP-002308743) as disclosing the syntax and details of the SEI message and parameters on pages 2-4 of that reference (See page 3 of the Office action). On page 4 of the Office action, the examiner refers to the Gomila publication, and specifically section 3.1 as teaching the selection of parameterized film grain patterns.

The Gomila publication "SEI message for Film Grain Encoding: Syntax and Results" (XP-002308743) does not contain any section explicitly designated as "Section 3.1" nor any

discussion regarding patterns of film grain associated with various different film stocks. Rather, the publication "SEI message for Film Grain Encoding", by Cristina Gomila and Alexander Kobilansky (XP-002308742) contains Section 3.1 and Section 3.2 referred to by the examiner. The Gomila and Kobilansky publication (XP-002308742) does not constitute the same document as the Gomila publication (XP-002308743), but a publication separate and distinct therefrom, as evidenced by a separate document number. To the extent that the examiner intended to rely on the separate Gomila and the Gomila and Kobilansky publications in support of the rejection, the examiner should have made such reliance explicit. For purposes of addressing the rejection of claims 1-14, applicants will presume that the examiner relied on both publications.

In rejecting applicants' claims, the examiner has suggested that the Schlockermann et al. publication teaches extraction, coding and decoding of film grain, whereas the Gomila publication (XP-002308743) teaches the details of the SEI message block. On that basis, the examiner has contended that it would have been obvious to compute the average value of an image parameter. The examiner further contends that the Gomila and Kobilansky publication (XP-002308742) teaches the generation of parameterized film grain. On that basis, the examiner believes that it would have been obvious to select a film grain pattern from a database of such patterns whose image parameter most closely matches the average value of the image parameter of the input image block. Lastly, the examiner contends the Gomila publication (XP-002308743) teaches applicants' blending step.

As discussed in applicants' prior response, the Schlockermann et al. publication concerns a film grain simulation technique that employs a decoder as a film grain removal filter. A single representative block of film grain undergoes encoding for transmission along with the compressed image. After decoding, the transmitted film grain block gets blended with the image. The Schlockermann et al. publication says nothing whatsoever regarding selecting a film grain block from among a pool of previously computed blocks, let alone doing so by matching average value of an image parameter (e.g., intensity) of the selected film grain block to the average image to corresponding parameter in the image block.

The Gomila publication (XP-002308743) concerns the syntax of a Supplemental Enhancement Message (SEI) message that accompanies an image block encoded in accordance with the H.264/AVC compression standard. The syntax provided in Gomila publication (XP-002308743) describes parameters of a model for simulating film grain present in the original

image. By using the parameters conveyed in the SEI message, a downstream decoder can make use of a parameterized model to simulate a film grain block. Like the Schlockermann et al. publication, the Gomila publication (XP-002308743) says nothing whatsoever regarding selecting a film grain block from among a pool of previously computed blocks, let alone doing so by matching the average of an image parameter of the selected film grain block to the average value of the corresponding parameter of the image block.

As discussed above, neither the Schlockermann et al. nor the Gomila publication (XP-002308743) say anything about applicants' feature of selecting a film grain block from at least one previously established pool of film grain blocks. The examiner appears to concede as much, given the examiner's need to rely upon the Gomila and Kobilansky publication (XP-002308742) for such a teaching. However, a careful review of Gomila and Kobilansky publication (XP-002308742) reveals no such support for the examiner's proposition that this publication teaches applicants' selecting step.

At best, the Gomila and Kobilansky publication (XP-002308742) describes the desirability of transmitting film stock identification in an SEI message. Given that different film stocks possess different film grain, the film stock identification enables development of a parameterized film grain model for simulation purposes. To the extent that film stock information remains unknown, the film grain can be transmitted as a generic model whose parameters can include spatial correlation, aspect ratio, cross-color correlation and noise intensity.

Like the Schlockermann et al. publication (XP-002311238) and the Gomila publication (XP-002308743), the Gomila and Kobilansky publication (XP-002308742) contains no explicit disclosure teaching applicants' step of:

> selecting a film grain block from at least one previously established pool of film grain blocks whose image parameter most closely matches the average value of the image parameter of the input image block

Nowhere does the Gomila and Kobilansky publication (XP-002308742) disclose or suggest creating a pool of previously established film grain blocks, let alone, selecting from such pool based on matching the average value of an image parameter (e.g., intensity) of the film grain block to the average value of the corresponding parameter in the input image block. To the extent that the Gomila and Kobilansky publication (XP-002308742) refer to pre-existing film grain patterns, the publication only does so in the context of the film grain associated with a

given film stock. Therefore, to select among different pre-existing firm grain patterns in accordance with the teachings of the Gomila and Kobilansky publication (XP-002308742) would entail picking from among different film grain stocks. Thus, it would make no sense whatsoever to use the average value of an image parameter (e.g., intensity) as a selecting criterion since such a criterion would not identify a particular film grain stock. In other words, the average of an image parameter, such as the intensity does not correlate to any of the particular identifiers exemplified in Table 1 of the Gomila and Kobilansky publication (XP-002308742) which each designate a particular film stock type.

Applicants acknowledge that Section 3.2 of the Gomila and Kobilansky publication (XP-002308742) discloses the transmission of various parameters in the SEI message in the event the film stock remains unknown. Such parameters enable a parameterized model to generate film grain "on the fly." Section 3.2 says nothing regarding generating film grain blocks in advance and then selecting among such a pool of previously selected blocks, as recited in applicants' claims 1 and 8 and the claims that depend therefrom.

In summary, none of the references, either alone or in any combination, teach applicants' feature of selecting a film grain block from at least one previously established pool of film grain blocks whose image parameter most closely matches the average value of the image parameter of the input image block. Therefore, claims 1 and 8, and the claims that depend therefrom, patent distinguish over the art of record. Applicants request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1-14.

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

Serial No. 10/572,820
Art Unit 2624

Docket No.: PU030274
Customer No. 24498

No fees are believed due with regard to this Amendment. Please charge any fee or credit any overpayment to Deposit Account No. **07-0832.**

Respectfully submitted,
Cristina Gomila

By: _____
Robert B. Levy
Attorney for Applicants
Reg. No. 28,234
Phone (609) 734-6820

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
Princeton, New Jersey 08543-5312
July 14, 2010